

CLAIMS

1. A purified polynucleotide comprising a nucleic acid sequence encoding the polypeptide of SEQ ID NO:2, or the complement of said polynucleotide.
2. The polynucleotide of Claim 1 comprising the nucleic acid sequence for a novel human Jak2 kinase (hjak2) of SEQ ID NO:1.
3. An antisense molecule comprising the complement of the polynucleotide of Claim 2 or a portion thereof.
4. A pharmaceutical composition comprising the antisense molecule of Claim 3 and a pharmaceutically acceptable excipient.
5. A method of treating a subject with a condition associated with altered hjak2 expression comprising administering an effective amount of the pharmaceutical composition of Claim 4 to the subject.
6. A diagnostic composition comprising an oligomer of the polynucleotide of Claim 2.
7. A diagnostic test for a condition associated with altered hjak2 expression comprising the steps of:
 - a) providing a biological sample;
 - b) combining the biological sample and the diagnostic composition of Claim 6;
 - c) allowing hybridization to occur between the biological sample and the diagnostic composition under suitable conditions;
 - d) measuring the amount of hybridization to obtain a sample value; and
 - e) comparing the sample value with standard values to determine whether hjak2 expression is altered.
8. An expression vector comprising the polynucleotide of Claim 1.
9. A host cell transformed with the expression vector of Claim 8.
10. A method for producing a polypeptide, said method comprising the steps of:
 - a) culturing the host cell of Claim 9 under conditions suitable for the expression of the polypeptide; and
 - b) recovering the polypeptide from the host cell culture.
11. A purified polypeptide (HJAK2) comprising the amino acid sequence of SEQ ID NO:2.

1 12. A diagnostic composition comprising the polypeptide of Claim 11 or a portion thereof.

13. A pharmaceutical composition comprising the polypeptide of Claim 11 and a pharmaceutically acceptable excipient.

6 14. A method of treating a subject with a condition associated with altered HJAK2 expression comprising administering an effective amount of the pharmaceutical composition of Claim 13 to the subject.

15. An antibody specific for the purified polypeptide of Claim 11, or portion thereof.

16. A diagnostic composition comprising the antibody of Claim 15.

11 17. A diagnostic test for a condition associated with altered HJAK2 expression comprising the steps of:

a) providing a biological sample;

b) combining the biological sample and the antibody of Claim 15 under conditions suitable for complex formation;

16 c) measuring the amount of complex formation between HJAK2 and the antibody to obtain a sample amount; and

21 d) comparing the amount of complex formation in the sample with standard amounts of complex formation, wherein a variation between the sample amount and standard amounts of complex formation establishes the presence of the condition.

18. A method of screening a plurality of compounds for specific binding affinity with the polypeptide of Claim 11 or any portion thereof comprising the steps of:

a) providing a plurality of compounds;

26 b) combining HJAK2 with each of a plurality of compounds for a time sufficient to allow binding under suitable conditions; and

c) detecting binding of HJAK2 to each of the plurality of compounds, thereby identifying the compounds which specifically bind HJAK2.

add
B1

add c³

add
D⁷